



Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division

RENEWABLE OPERATING PERMIT APPLICATION C-001: CERTIFICATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to provide this information may result in civil and/or criminal penalties. Please type or print clearly.

This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.

Form Type C-001	SRN P0582
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Stationary Source Name Wolverine Power Supply Cooperative Incorporated – Alpine Power Plant	
City Elmira	County Otsego

SUBMITTAL CERTIFICATION INFORMATION	
1. Type of Submittal <i>Check only one box.</i>	
<input type="checkbox"/> Initial Application (Rule 210)	<input checked="" type="checkbox"/> Notification / Administrative Amendment / Modification (Rules 215/216)
<input type="checkbox"/> Renewal (Rule 210)	<input type="checkbox"/> Other, describe on AI-001
2. If this ROP has more than one Section, list the Section(s) that this Certification applies to <u>N/A</u>	
3. Submittal Media <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Disk <input checked="" type="checkbox"/> Paper	
4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal. AI	

CONTACT INFORMATION	
Contact Name Joe Hazewinkel	Title Director of Environmental Affairs
Phone number 231-779-3367	E-mail address jhazewinkel@wpsci.com

This form must be signed and dated by a Responsible Official.				
Responsible Official Name Joseph J. Baumann			Title Chief Legal Officer	
Mailing address 10125 W. Watergate Road Cadillac, MI 49601				
City Cadillac	State MI	ZIP Code 49601	County Wexford	Country USA
As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.				
 _____ Signature of Responsible Official			_____ 8/1/24 Date	



RENEWABLE OPERATING PERMIT M-001: RULE 215 CHANGE NOTIFICATION RULE 216 AMENDMENT/MODIFICATION APPLICATION

This information is required by Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment.

1. SRN P0582	2. ROP Number MI-ROP-P0582-2019a	3. County Otsego
4. Stationary Source Name Wolverine Power Supply Cooperative Incorporated - Alpine Power Plant		
5. Location Address 7432 M-32, Elmira, Otsego County, MI 49730		6. City Elmira
<p>7. Submittal Type - <i>The submittal must meet the criteria for the box checked below. Check only one box. Attach a mark-up of the affected ROP pages for applications for Rule 216 changes.</i></p> <p><input type="checkbox"/> Rule 215(1) Notification of change. <i>Complete Items 8 – 10 and 14</i></p> <p><input type="checkbox"/> Rule 215(2) Notification of change. <i>Complete Items 8 – 10 and 14</i></p> <p><input type="checkbox"/> Rule 215(3) Notification of change. <i>Complete Items 8 – 11 and 14</i></p> <p><input type="checkbox"/> Rule 215(5) Notification of change. <i>Complete Items 8 – 10 and 14</i></p> <p><input type="checkbox"/> Rule 216(1)(a)(i)-(iv) Administrative Amendment. <i>Complete Items 8 – 10 and 14</i></p> <p><input type="checkbox"/> Rule 216(1)(a)(v) Administrative Amendment. <i>Complete Items 8 – 14. Results of testing, monitoring & recordkeeping must be submitted. See detailed instructions.</i></p> <p><input checked="" type="checkbox"/> Rule 216(2) Minor Modification. <i>Complete Items 8 – 12 and 14</i></p> <p><input type="checkbox"/> Rule 216(3) Significant Modification. <i>Complete Items 8 – 12 and 14, and provide any additional information needed on ROP application forms. See detailed instructions.</i></p> <p><input type="checkbox"/> Rule 216(4) State-Only Modification. <i>Complete Items 8 – 12 and 14</i></p>		
8. Effective date of the change. (MM/DD/YYYY) <i>See detailed instructions.</i> <u>08/01/2024</u>		9. Change in emissions? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>10. Description of Change - <i>Describe any changes or additions to the ROP, including any changes in emissions and/or pollutants that will occur. If additional space is needed, complete an Additional Information form (AI-001).</i></p> <p>Wolverine Power installed Continuous Emissions Monitoring Systems (CEMS) to monitor the NOX emissions from EUCTG1 and EUCTG2 pursuant to Part 75. Wolverine Power requested to incorporate the CEMS requirements into the existing Permit and remove the special condition FGCTG V.1 requirement to verify the NOX emission rate from each turbine at 50%, 75%, and 100% load on an annual basis with the applicable Title 40 CFR Part 75 QA Procedures</p>		
11. New Source Review Permit(s) to Install (PTI) associated with this application? If Yes, enter the PTI Number(s) <u>206-14A</u> - - - - -		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>12. Compliance Status - <i>A narrative compliance plan, including a schedule for compliance, must be submitted using an AI-001 if any of the following are checked No.</i></p> <p>a. Is the change identified above in compliance with the associated applicable requirement(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>b. Will the change identified above continue to be in compliance with the associated applicable requirement(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>c. If the change includes a future applicable requirement(s), will timely compliance be achieved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		
13. Operator's Additional Information ID - <i>Create an Additional Information (AI) ID for the associated AI-001 form used to provide supplemental information.</i>		AI PTI 206-14A
14. Contact Name Joe Hazewinkel	Telephone No. 231-779-3367	E-mail Address jhazewinkel@wpsci.com
15. This submittal also updates the ROP renewal application submitted on <u>02/06/2024</u> <i>(If yes, a mark-up of the affected pages of the ROP must be attached.)</i>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A



RENEWABLE OPERATING PERMIT APPLICATION

AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN:

Section Number (if applicable):

1. Additional Information ID

AI-206-14A

Additional Information

2. Is This Information Confidential?

 Yes No

Please find attached a copy PTI 206-14A.

The ROP is currently underging renewal, a marked up copy of FG-Turbines is also attached.

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

August 1, 2024

**PERMIT TO INSTALL
206-14**

ISSUED TO
Wolverine Power Supply Cooperative Incorporated – Alpine Power Plant

LOCATED AT
7432 M-32
Elmira, Michigan 49730

IN THE COUNTY OF
Otsego

STATE REGISTRATION NUMBER
P0582

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: June 12, 2024	
DATE PERMIT TO INSTALL APPROVED: August 1, 2024	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUCTG1	A nominal 203 MW natural gas fired simple cycle combustion turbine generator with a peak heat input of 2,045 MMBtu/hr.	06-13-2016	FGCTG
EUCTG2	A nominal 203 MW natural gas fired simple cycle combustion turbine generator with a peak heat input of 2,045 MMBtu/hr.	06-13-2016	FGCTG

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGCTG	Two nominal 203 MW natural gas fired simple cycle combustion turbine generators, each with a peak load of 2,045 MMBtu/hr.	EUCTG1, EUCTG2

**FGCTG
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Two nominal 203 MW natural gas fired simple cycle combustion turbine generators, each with a peak load of 2,045 MMBtu/hr.

Emission Unit: EUCTG1, EUCTG2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NOx	3.27E-2 lb/MMBTU not including startup/shutdown	Hourly	EUCTG1 and EUCTG2 each	SC IV.4, SC VI.9	R 336.1205(1) 40 CFR 52.21(c & d)
2. NOx	15 ppm at 15 percent O ₂ or 0.43 lb/MWh	Hourly as determined on a 4-hour rolling average	EUCTG1 and EUCTG2 each	SC IV.4, SC VI.8	40 CFR 60.4320(a) 40 CFR 60.4380(b)
3. NOx	66.8 pph not including startup/shutdown	Hourly	EUCTG1 and EUCTG2 each	SC IV.4, SC VI.9	R 336.1205(1) 40 CFR 52.21(c & d)
4. NOx	30 lb/event	Each startup event	EUCTG1 and EUCTG2 each	SC VI.3	R 336.1205(1) 40 CFR 52.21(c & d)
5. NOx	25 lb/event	Each startup event	EUCTG1 and EUCTG2 each	SC VI.3	R 336.1205(1) 40 CFR 52.21(c & d)
6. NOx	244 tpy	12-month rolling time period as determined at the end of each calendar month.	FGCTG	SC VI.2 & Appendix A	R 336.1205(1) 40 CFR 52.21(c & d)
7. CO	2.0E-2 lb/MMBTU not including startup/shutdown	Hourly	EUCTG1 and EUCTG2 each	SC V.1	R 336.1205(1) 40 CFR 52.21(d)
8. CO	40.9 pph not including startup/shutdown	Hourly	EUCTG1 and EUCTG2 each	SC V.1	R 336.1205(1) 40 CFR 52.21(d)
9. CO	320 lb/event	Each startup event	EUCTG1 and EUCTG2 each	SC VI.3	R 336.1205(1) 40 CFR 52.21(d)
10. CO	336 lb/event	Each startup event	EUCTG1 and EUCTG2 each	SC VI.3	R 336.1205(1) 40 CFR 52.21(d)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
11. CO	246 tpy	12-month rolling time period as determined at the end of each calendar month.	FGCTG	SC VI.2 & Appendix A	R 336.1205(1) 40 CFR 52.21(d)
12. VOC as methane	1.40E-3 lb/MMBTU not including startup/shutdown	Hourly	EUCTG1 and EUCTG2 each	SC V.1	R 336.1205(1) R 336.1702(a)
13. VOC as methane	2.9 pph not including startup/shutdown	Hourly	EUCTG1 and EUCTG2 each	SC V.1	R 336.1205(1) R 336.1702(a)
14. PM10	6.6E-3 lb/MMBTU not including startup/shutdown	Hourly	EUCTG1 and EUCTG2 each	SC V.1	R 336.1205(1) 40 CFR 52.21(c & d)
15. PM10	13.5 pph not including startup/shutdown	Hourly	EUCTG1 and EUCTG2 each	SC V.1	R 336.1205(1) 40 CFR 52.21(c & d)
16. PM2.5	6.6E-3 lb/MMBTU not including startup/shutdown	Hourly	EUCTG1 and EUCTG2 each	SC V.1	R 336.1205(1) 40 CFR 52.21(c & d)
17. PM2.5	13.5 pph not including startup/shutdown	Hourly	EUCTG1 and EUCTG2 each	SC V.1	R 336.1205(1) 40 CFR 52.21(c & d)
18. CO ₂	120 lb/MMBTU	Hourly	EUCTG1 and EUCTG2 each	SC II.1 SC VI.4	40 CFR 60.5520 (a&d)(1), 40 CFR Part 60 Subpart TTTT, Table 2

II. MATERIAL LIMIT(S)

1. The permittee shall only combust natural gas in FGCTG. **(R 336.1205(1), R 336.1225, R 336.1702(a), 40 CFR 60.4330, 40 CFR 60.5520(d)(1))**
2. The total natural gas use for FGCTG shall not exceed 14,567 MMSCF per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.1205(1), R 336.1225, R 336.1702(a), 40 CFR 52.21(c & d))**
3. The permittee shall not burn in FGCTG any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBTU) heat input. **(40 CFR 60.4330(a)(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGCTG unless a Malfunction Abatement Plan (MAP) as described in Rule 911(2) is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c & d))**

2. The permittee shall not operate FGCTG unless the AQD District Supervisor has approved a plan that describes how emissions will be minimized during startup and shutdown. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. Unless notified by the AQD District Supervisor within 30 business days after plan submittal, the plan shall be deemed approved. **(R 336.1205(1), R 336.1911, R 336.1912, 40 CFR 60.4333(a))**
3. Startup and shut down operations for each combustion turbine in FGCTG shall be minimized as specified in SC III.2. Startup is defined as the period of time from initial combustion of fuel until the unit reaches a minimum load of 101.2 MW of electrical output (loads greater than 50% of design capacity). Shutdown is defined as that period of time from the initial lowering of the turbine output below 101.2 MW of electrical output (50% of full operating load), with the intent to shut down, until fuel is no longer burned in the unit. **(R 336.1205(1))**
4. The permittee shall not operate EUCTG1 or EUCTG2 unless low NOx and CO manufacturer installed combustion technologies are maintained and operated in a satisfactory manner, for each combustion turbine generator. Satisfactory manner includes operating and maintaining each unit in accordance with an approved MAP for FGCTG as required in SC III.1. **(R 336.1205(1), R 336.1225, R 336.1910, 40 CFR 52.21(c & d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for FGCTG shall not exceed, on a fuel heat input basis, a nominal 2,045 MMBtu per hour for each combustion turbine generator. **(R 336.1205(1), R 336.1225, 40 CFR 52.21(c & d))**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas flow rate to EUCTG1 and EUCTG2 each on a continuous basis. **(R 336.1205(1), 40 CFR 52.21(c & d))**
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the gross energy output from EUCTG1 and EUCTG2 each on a continuous basis. **(R 336.1205(1), 40 CFR 52.21(c & d))**
4. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, devices to monitor and record the NO_x and either oxygen (O₂), or carbon dioxide (CO₂) content of the exhaust gas from each turbine in FGCTG on a continuous basis. The permittee shall install and operate the Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix B. **((R 336.1205(1), 40 CFR 52.21(c & d), 40 CFR Part 75, 40 CFR 60.4320, 40 CFR 60.4340(b)(1), 40 CFR 60.4345, Table 1 of 40 CFR Part 60 Subpart KKKK, 40 CFR Part 75)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall verify the CO, VOC, PM₁₀, and PM_{2.5} emission rates and mass emissions in SC I.7, I.8, I.12-17 from each turbine, EUCTG1 and EUCTG2, at maximum emitting normal operating conditions or other loads as approved by AQD, by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of three test runs per the method requirements. The permittee shall complete testing once every five years unless an alternate testing schedule is approved by the District Supervisor. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit Supervisor and to the District Supervisor. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit Supervisor and to the District Supervisor within 60 days following the last date of the test. **(R 336.1203(3), R 336.1205(1), R 336.2001, R 336.2003, R 336.2004)**

2. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
NOx	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
PM10/PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. **(R 336.1203(3), R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1203(3), 40 CFR 52.21(c & d))**
2. The permittee shall keep, in a satisfactory manner, records of monthly and 12-month rolling NOx and CO emission records for each turbine in FGCTG, as required by SC I.6 and SC I.11. The calculations shall be performed as specified in Appendix A. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) &(b), 40 CFR 52.21(c & d))**
3. The permittee shall keep, in a satisfactory manner, daily records of each startup and shut down event, including duration of the event. The permittee shall calculate startup and shut down emissions using the data as supplied by the vendor on a per event basis. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a & b), 40 CFR 52.21(c & d))**
4. The permittee shall monitor and record, in a satisfactory manner, the natural gas usage for EUCTG1 and EUCTG2 each on a daily, monthly and 12-month rolling time period basis. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a & b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c & d))**
5. The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit. This information shall include, but shall not be limited to the following:
 - a) Compliance tests and any testing required under the special conditions of this permit;
 - b) Monitoring data;
 - c) Total sulfur content of the natural gas as required by 40 CFR 60.4365(a);
 - d) Verification of heat input capacity required to show compliance with SC IV.1;
 - e) Amounts of fuel combusted in each turbine, EUCTG1 and EUCTG2, on a calendar month basis;
 - f) All records required by 40 CFR 60.7;
 - g) Records of the dates, times, duration and associated number of startup and shutdown events;
 - h) All calculations necessary to show compliance with the limits contained in this permit.

All of the above information shall be stored in a format acceptable to the Air Quality Division and shall be consistent with the requirements of 40 CFR 60.7(f). **(R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1912, 40 CFR 52.21(c & d), 40 CFR 60.7(f))**

6. The permittee may elect not to monitor the total sulfur content of the fuel combusted in FGCTG as required in SC VI.5. The required demonstration must be made by maintaining the fuel quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract for the fuel, specifying that the maximum total sulfur content for natural gas is 20 grains of sulfur or less per 100 standard cubic feet, or the natural gas has potential sulfur emissions of less than 0.060 lb. SO₂/MMBtu heat input. **(40 CFR 60.4365)**

7. The permittee shall keep, in a satisfactory manner, purchase records for the natural gas burned in FGCTG. **(40 CFR 60.5520(d)(1))**
8. The permittee shall use the data from SC IV.4 to calculate the 4-hour rolling average NO_x emissions for each turbine in FGCTG for each hour of operation, as described in [§60.4350 & §60.4380\(b\)\(1\)](#). The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4350, 40 CFR 60.4380(b)(1))**
9. The permittee shall keep, in a satisfactory manner, hourly NO_x concentration, mass emission, and lb/MMBtu records for each turbine in FGCTG, as required by SC IV.4. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1), 40 CFR 52.21(c & d))**
10. The permittee shall develop and keep on-site a quality assurance (QA) plan for all continuous monitoring equipment described in 40 CFR 60.4335(a), (c), and (d). For the CEMS and fuel flow meters, the owner or operator may, with District Supervisor approval, satisfy the requirements of this condition by implementing the QA program and plan described in 40 CFR 75 (Appendix B)(1). **(40 CFR 60.4345)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
SV-CTG1	264	85	R 336.1225 40 CFR 52.21(c & d)
SV-CTG2	264	85	R 336.1225 40 CFR 52.21(c & d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart A and KKKK, as they apply to FGCTG. **(40 CFR Part 60, Subparts A & KKKK)**
2. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart TTTT, as they apply to FGCTG. **(40 CFR Part 60, Subpart TTTT)**
3. The permittee shall comply with the acid rain permitting provisions of 40 CFR 72.1 to 72.94, as outlined in a complete Phase II, Acid Rain Permit issued by the AQD. Phase II, Acid Rain Permit No. MI-AR-59926-2019 is hereby incorporated into this ROP as Appendix 9. **(R 336.1299(2)(a))**
4. The permittee shall not allow the emission of an air pollutant to exceed the amount of any emission allowances that an affected source lawfully holds as of the allowance transfer deadline pursuant to R 336.1299(2)(a) and 40 CFR 72.9(c)(1)(i). **(R 336.1213(10))**
5. The permittee shall comply with the provisions of the Transport Rule NO_x Annual Trading Program, as specified in 40 CFR Part 97, Subpart AAAAA, as they apply to FGCTG. **(40 CFR Part 97, Subpart AAAAA)**

6. The permittee shall comply with the provisions of the Transport Rule NO_x Ozone Season Trading program, as specified in 40 CFR Part 97, Subpart BBBBB, as they apply to FGCTG. **(40 CFR Part 97, Subpart BBBBB)**
7. The permittee shall comply with the provisions of the Transport Rule SO₂ Group 1 Trading Program, as specified in 40 CFR Part 97, Subpart CCCCC, as they apply to FGCTG. **(40 CFR Part 97, Subpart CCCCC)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

APPENDIX A

NO_x

The permittee shall use the following formulas to calculate NO_x emissions for FGCTG. The calculations will be used to demonstrate compliance with the FGCTG emission limit of 244 tpy based on a 12-month rolling time period average.

Monthly Emissions:

Daily combustion turbine operating status (start up and shut down operation as defined in FGCTG SC III.3 or normal operations) operating load, and fuel usage must be monitored and recorded.

To estimate emissions during start up and shut down events the permittee shall use the lb/event emission rate as specified in FGCTG Emission Limits Table.

The actual combustion turbine NO_x emissions, as provided by the NO_x CEMS data, shall be used to calculate the tons per month (TPM) for FGCTG. (An average is not acceptable.)

Emissions of NO_x in TPM from FGCTG are calculated as follows:

$$TPM = NO_x \text{ Emissions from } CEMS_{EU-CTG1} \left(\frac{\text{ton}}{\text{month}} \right) + NO_x \text{ Emissions from } CEMS_{EU-CTG2} \left(\frac{\text{ton}}{\text{month}} \right) \\ + \left(NO_x EF_{EU-CTG1} * \frac{\text{Number of Events}}{\text{month}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} \right) + \left(NO_x EF_{EU-CTG2} * \frac{\text{Number of Events}}{\text{month}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} \right)$$

NO_x Emissions from CEMS_{EU-CTG} = The NO_x emission rate from CEMS for the specific turbine included in FGCTG.

NO_xEF_{EU-CTG#} = NO_x start up and shut down lb/event emission rates as specified in FGCTG Emission Limits Table.

12-Month Rolling Emissions:

The permittee shall sum the NO_x emissions from FGCTG in a given month to the NO_x emissions from FGCTG from the previous eleven (11) months to calculate the 12-month rolling emissions.

FG-FACILITY Emissions:

The permittee shall sum the emissions calculated for FGCTG in Appendix A, EU-EMERGEN, EU-FIREPUMP, FG-FUElhTR and any other later permitted or exempt equipment to demonstrate compliance with the NO_x FG-FACILITY limit of less than 249 tpy.

CO

The permittee shall use the following formulas to calculate CO emissions for FGCTG. The calculations will be used to demonstrate compliance with the FGCTG emission limit of 246 tpy based on a 12-month rolling time period average.

Monthly Emissions:

Daily combustion turbine operating status (start up and shut down operation as defined in FGCTG SC III.3 or normal operations) operating load, and fuel usage must be monitored and recorded.

To estimate emissions during start up and shut down events the permittee shall use the lb/event emission rate as specified in FGCTG Emission Limits Table.

Stack testing the combustion turbines must be completed to develop emission factors (EF).

The actual combustion turbine monthly fuel usage in MMBtu, as determined by CEMS, shall be used to calculate the TPM for FGCTG. (An average is not acceptable.)

Emissions of CO in TPM from FGCTG are calculated as follows:

$$TPM = (COEF_{EU-CTG1} * \frac{MMBtu_{EUCTG1}}{Month * \frac{1 \text{ ton}}{2000 \text{ lbs}}} + (COEF_{EU-CTG2} * \frac{MMBtu_{EUCTG2}}{Month * \frac{1 \text{ ton}}{2000 \text{ lbs}}}) + \left(COEF_{EU-CTG1_SUSD} * \frac{\text{Number of Events}}{\text{month}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} \right) + \left(COEF_{EU-CTG2_SUSD} * \frac{\text{Number of Events}}{\text{month}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} \right)$$

COEF_{EU-CTG} = The CO emission factor for the specific turbine included in FGCTG in lb/MMBtu.

COEF_{EU-CTG#_SUSD} = CO start up and shut down lb/event emission rates as specified in FGCTG Emission Limits Table.

MMBtu_{EUCTG}/mo = The monthly fuel heat input rate for the specific turbine included in FGCTG as measured by the CEMS.

12-Month Rolling Emissions:

The permittee shall sum the CO emissions from FGCTG in a given month to the CO emissions from FGCTG from the previous eleven (11) months to calculate the 12-month rolling emissions.

FG-FACILITY Emissions:

The permittee shall sum the emissions calculated for FGCTG in Appendix A, EU-EMERGEN, EU-FIREPUMP, FG-FUElhTR and any other later permitted or exempt equipment to demonstrate compliance with the CO FG-FACILITY limit of less than 249 tpy.

APPENDIX B
Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of trial start-up, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.
2. Within 150 calendar days after commencement of trial start-up, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 180 calendar days after commencement of trial start-up, the permittee shall complete the installation and testing of the CEMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table:

Pollutant	Applicable PS
NO _x	2
O ₂ & CO ₂	3
CO	4

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS, listed in the table above, of Appendix B to 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F).
8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
 - a) A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
 - b) A report of all periods of CEMS downtime and corrective action.
 - c) A report of the total operating time of each turbine in FGCTG during the reporting period.
 - d) A report of any periods that the CEMS exceeds the instrument range.
 - e) If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep all monitoring data on file for a period of at least five years and make them available to the AQD upon request.

App # 202400128

MARKED UP COPY OF ROP FG-TURBINE CONDITIONS

FGCTG FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Two nominal 203 MW natural gas fired simple cycle combustion turbine generators, each with a peak load of 2,045 ~~MMBTU~~MMBtu/hr.

Emission Unit: EUCTG1, EUCTG2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	3.27E-2 lb/MMBTU Not including startup / shutdown ²	Hourly	EUCTG1 and EUCTG2 each	SC V.2 IV.4, SC VI.9	R 336.1205(1) 40 CFR 52.21(c & d)
2. NOx	15 ppm at 15 percent O ₂ or 0.43 lb/MWh	Hourly Hourly as determined on a 4- hour rolling average	EUCTG1 and EUCTG2 each	SC V.1 IV.4, SC VI.8	40 CFR 60.4320(a) <u>40 CFR 60.4380(b)</u>
3. NOx	66.8 pph Not including startup / shutdown ²	Hourly	EUCTG1 and EUCTG2 each	SC V.2 IV.4, SC VI.9	R 336.1205(1) 40 CFR 52.21(c & d)
4. NOx	30 lb/event ²	Each startup event	EUCTG1 and EUCTG2 each	SC VI.3	R 336.1205(1) 40 CFR 52.21(c & d)
5. NOx	25 lb/event ²	Each shutdown event	EUCTG1 and EUCTG2 each	SC VI.3	R 336.1205(1) 40 CFR 52.21(c & d)
6. NOx	244 tpy ²	12-month rolling time period as determined at the end of each calendar month.	FGCTG	SC VI.2 & Appendix A	R 336.1205(1) 40 CFR 52.21(c & d)
7. CO	2.0E-2 lb/MMBTU Not including startup / shutdown ²	Hourly	EUCTG1 and EUCTG2 each	SC V.21	R 336.1205(1) 40 CFR 52.21(d)
8. CO	40.9 pph Not including startup / shutdown ²	Hourly	EUCTG1 and EUCTG2 each	SC V.21	R 336.1205(1) 40 CFR 52.21(d)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
9. CO	320 lb/event ²	Each startup event	EUCTG1 and EUCTG2 each	SC VI.3	R 336.1205(1) 40 CFR 52.21(d)
10. CO	336 lb/event ²	Each shutdown event	EUCTG1 and EUCTG2 each	SC VI.3	R 336.1205(1) 40 CFR 52.21(d)
11. CO	246 tpy ²	12-month rolling time period as determined at the end of each calendar month.	FGCTG	SC VI.2 & Appendix A	R 336.1205(1) 40 CFR 52.21(d)
12. VOC as methane	1.40E-3 lb/MMBTU Not including startup / shutdown ²	Hourly	EUCTG1 and EUCTG2 each	SC V.31	R 336.1205(1) R 336.1702(a)
13. VOC as methane	2.9 pph Not including startup / shutdown ²	Hourly	EUCTG1 and EUCTG2 each	SC V.31	R 336.1205(1) R 336.1702(a)
14. PM10	6.6E-3 lb/MMBTU Not including startup / shutdown ²	Hourly	EUCTG1 and EUCTG2 each	SC V.31	R 336.1205(1) 40 CFR 52.21(c & d)
15. PM10	13.5 pph Not including startup / shutdown ²	Hourly	EUCTG1 and EUCTG2 each	SC V.31	R 336.1205(1) 40 CFR 52.21(c & d)
16. PM2.5	6.6E-3 lb/MMBTU Not including startup / shutdown ²	Hourly	EUCTG1 and EUCTG2 each	SC V.31	R 336.1205(1) 40 CFR 52.21(c & d)
17. PM2.5	13.5 pph Not including startup / shutdown ²	Hourly	EUCTG1 and EUCTG2 each	SC V.31	R 336.1205(1) 40 CFR 52.21(c & d)
18. CO ₂	120 lb/MMBTU	Hourly	EUCTG1 and EUCTG2 each	SC II.1 SC VI.74	40 CFR 60.5520(a & d)(1) 40 CFR Part 60, Subpart TTTT, Table 2

II. MATERIAL LIMIT(S)

- The permittee shall only combust natural gas in FGCTG.² (R 336.1205(1), R 336.1225, R 336.1702(a), 40 CFR 60.4330, 40 CFR 60.5520(d)(1))
- The total natural gas use for FGCTG shall not exceed 14,567 MMSCF per year on a 12-month rolling time period basis as determined at the end of each calendar month.² (R 336.1205(1), R 336.1225, R 336.1702(a), 40 CFR 52.21(c & d))
- The permittee shall not burn in FGCTG any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBTU) heat input.² (40 CFR 60.4330(a)(2))

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGCTG unless a Malfunction Abatement Plan (MAP) as described in Rule 911(2) is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c & d))**
2. The permittee shall not operate FGCTG unless the AQD District Supervisor has approved a plan that describes how emissions will be minimized during startup and shutdown. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. Unless notified by the AQD District Supervisor within 30 business days after plan submittal, the plan shall be deemed approved.² **(R 336.1205(1), R 336.1911, R 336.1912, 40 CFR 60.4333(a))**
3. Startup and shut down operations for each combustion turbine in FGCTG shall be minimized as specified in SC III.2. Startup is defined as the period of time from initial combustion of fuel until the unit reaches a minimum load of 101.2 MW of electrical output (loads greater than 50% of design capacity). Shutdown is defined as that period of time from the initial lowering of the turbine output below 101.2 MW of electrical output (50% of full operating load), with the intent to shut down, until fuel is no longer burned in the unit. **(R 336.1205(1))²**
4. The permittee shall not operate EUCTG1 or EUCTG2 unless low NO_x and CO manufacturer installed combustion technologies are maintained and operated in a satisfactory manner, for each combustion turbine generator. Satisfactory manner includes operating and maintaining each unit in accordance with an approved MAP for FGCTG as required in SC III.1.² **(R 336.1205(1), R 336.1225, R 336.1910, 40 CFR 52.21(c & d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for FGCTG shall not exceed, on a fuel heat input basis, a nominal 2,045 MMBtu per hour for each combustion turbine generator.² **(R 336.1205(1), R 336.1225, 40 CFR 52.21(c & d))**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas flow rate to EUCTG1 and EUCTG2 each on a continuous basis.² **(R 336.1205(1), 40 CFR 52.21(c & d))**
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the gross energy output from EUCTG1 and EUCTG2 each on a continuous basis.² **(R 336.1205(1), 40 CFR 52.21(c & d))**
4. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, devices to monitor and record the NO_x and either oxygen (O₂), or carbon dioxide (CO₂) content of the exhaust gas from each turbine in FGCTG on a continuous basis. The permittee shall install and operate the Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix B. **(R 336.1205(1), 40 CFR 52.21(c & d), 40 CFR Part 75, 40 CFR 60.4320, 40 CFR 60.4340(b)(1), 40 CFR 60.4345, Table 1 of 40 CFR Part 60 Subpart KKKK, 40 CFR Part 75)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.12131201(3)(b)(ii))**

- ~~1. The permittee shall verify the NOx emission rate in SC I.2 from each turbine, EUCTG1 and EUCTG2, at 50%, 75% and 100% loads or other loads as approved by AQD, by testing at owner's expense, in accordance with Department requirements. Compliance with the emission limit is achieved if the three-run arithmetic average NOx emission rate at each tested level meets the applicable emission limit in SC I.2. Testing shall be performed on an annual basis (no more than 14 months following the previous performance test). If the NOx emission result from the performance test is less than or equal to 75% of the NOx emission limit for the turbine as specified in 40 CFR 60.4320(a) [SC I.2], the permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75% of the NOx emission limit as specified in 40 CFR 60.4320(a) for the turbine, the permittee must resume annual performance tests. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report with the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1213, R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4340(a), 40 CFR 60.4400))~~

- ~~2. The permittee shall verify the NOx and CO emission rates and mass emissions in SC I.1, SC I.3, SC I.7, and SC I.8 from each turbine, EUCTG-1 and EUCTG2, at 50%, 75% and 100% loads or other loads as approved by AQD, by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of three test runs per the method requirements. The permittee shall complete testing once every five years unless an alternate testing schedule is approved by the District Supervisor. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1213(3), R 336.1205(1), R 336.2001, R 336.2003, R 336.2004)~~

~~3.1.~~ The permittee shall verify the CO, VOC, PM10, and PM2.5 emission rates and mass emissions in SC I.7, I.8, I.12-17 from each turbine, EUCTG-1 and EUCTG2, at maximum emitting normal operating conditions 50%, 75% and 100% loads or other loads as approved by AQD, by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of three test runs per the method requirements. The permittee shall complete testing once every five years unless an alternate testing schedule is approved by the District Supervisor. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit Supervisor and to the District Supervisor. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit Supervisor and to the District Supervisor within 60 days following the last date of the test.² (R 336.~~1213~~1203(3), R 336.1205(1), R 336.2001, R 336.2003, R 336.2004)

~~4.2.~~ Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
NOx	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
PM10/PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. (R 336.~~1213~~1203(3), R 336.2001, R 336.2003, R 336.2004)

3. The permittee shall perform the Quality Assurance Procedures of the NOx and oxygen (or carbon dioxide) CEMS. The Quality Assurance Procedures for the NOx CEMS and the oxygen (or carbon dioxide) CEMS shall be performed according to the procedures and schedule set forth in 40 CFR Part 75. (40 CFR Part 75)

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

- The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.~~1213~~1203(3), 40 CFR 52.21(c & d))
- The permittee shall keep, in a satisfactory manner, records of ~~daily~~, monthly and 12-month rolling NOx and CO emission records for EUCTG1 and EUCTG2 each turbine in FGCTG, as required by SC I.~~56~~ and SC I.~~40~~11. The calculations shall be performed as specified in Appendix A. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1205(1)(a) & (b), 40 CFR 52.21(c & d))
- The permittee shall keep, in a satisfactory manner, daily records of each startup and shut down event, including duration of the event. The permittee shall calculate startup and shut down emissions using the data as supplied by the vendor on a per event basis. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1205(1)(a & b), 40 CFR 52.21(c & d))
- The permittee shall monitor and record, in a satisfactory manner, the natural gas usage for EUCTG1 and EUCTG2 each on a daily, monthly and 12-month rolling time period basis. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1205(1)(a & b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c & d))
- The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit. This information shall include, but shall not be limited to the following:
 - Compliance tests and any testing required under the special conditions of this permit;

- b. Monitoring data;
- c. Total sulfur content of the natural gas as required by 40 CFR 60.4365(a);
- d. Verification of heat input capacity required to show compliance with SC IV.1;
- e. Amounts of fuel combusted in each turbine, EUCTG1 and EUCTG2, on a calendar month basis;
- f. All records required by 40 CFR 60.7;
- g. Records of the dates, times, duration and associated number of startup and shutdown events;
- h. All calculations necessary to show compliance with the limits contained in this permit.

All of the above information shall be stored in a format acceptable to the Air Quality Division and shall be consistent with the requirements of 40 CFR 60.7(f).² **(R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1912, 40 CFR 52.21(c & d), 40 CFR 60.7(f))**

6. The permittee may elect not to monitor the total sulfur content of the fuel combusted in FGCTG as required in SC VI.5, ~~if the fuel is demonstrated not to exceed the potential sulfur emissions in SC II.3.~~ The required demonstration must be made by maintaining the fuel quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract for the fuel, specifying that the maximum total sulfur content for natural gas is 20 grains of sulfur or less per 100 standard cubic feet, or the natural gas has potential sulfur emissions of less than 0.060 lb. SO₂/MMBtu heat input.² **(40 CFR 60.4365)**
7. The permittee shall keep, in a satisfactory manner, purchase records for the natural gas burned in FGCTG. **(40 CFR 60.5520(d)(1))**
8. The permittee shall use the data from SC IV.4 to calculate the 4-hour rolling average NO_x emissions for each turbine in FGCTG for each hour of operation, as described in §60.4350 & §60.4380(b)(1). The permittee shall keep all records on file and make them available to the Department upon request. (40 CFR 60.4350, 40 CFR 60.4380(b)(1))

See Appendix 7

9. The permittee shall keep, in a satisfactory manner, hourly NO_x concentration, mass emission, and lb/MMBtu records for each turbine in FGCTG, as required by SC IV.4. The permittee shall keep all records on file and make them available to the Department upon request. (R 336.1205(1), 40 CFR 52.21(c & d))
10. The permittee shall develop and keep on-site a quality assurance (QA) plan for all continuous monitoring equipment described in 40 CFR 60.4335(a), (c), and (d). For the CEMS and fuel flow meters, the owner or operator may, with District Supervisor approval, satisfy the requirements of this condition by implementing the QA program and plan described in 40 CFR 75 (Appendix B)(1). (40 CFR 60.4345)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Within 30 days following the end of each calendar quarter in which Quality Assurance Procedures of the NO_x and oxygen (or carbon dioxide) CEMS were performed as required by S.C. V.2, the permittee shall submit the results to the AQD in the format of the data assessment report described in Figure 1, Appendix F of 40 CFR Part 60. (R 336.1213(3))

5. For the NOx and oxygen (or carbon dioxide) CEMS, in accordance with 40 CFR 60.7(c) and (d) the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to Air Quality Division, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:

- a. A report of each exceedance above the permitted NOx emission limits. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period. (R 336. 1213(3))
- b. A report of all periods of CEMs downtime and corrective action. (R 336. 1213(3))
- c. A report of the total operating time of each turbine in FG-TURBINES during the reporting period.(R 336. 1213(3))
- d. If no exceedances or CEMs downtime occurred during the reporting period, permittee shall report that fact. (R 336. 1213(3))
- e. A report of any periods that the CEMs exceeds the instrument range. (R 336. 1213(3))

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-CTG1	264 ²	85 ²	R 336.1225 40 CFR 52.21(c & d)
2. SV-CTG2	264 ²	85 ²	R 336.1225 40 CFR 52.21(c & d)

IX. OTHER REQUIREMENT(S)

- 1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart A and KKKK, as they apply to FGCTG.² **(40 CFR Part 60, Subparts A & KKKK)**
- 2. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart TTTT, as they apply to FGCTG. **(40 CFR Part 60, Subpart TTTT)**
- 3. The permittee shall comply with the acid rain permitting provisions of 40 CFR 72.1 to 72.94, as outlined in a complete Phase II, Acid Rain Permit issued by the AQD. Phase II, Acid Rain Permit No. MI-AR-59926-2019 is hereby incorporated into this ROP as Appendix 9. **(R 336.1299(2)(a))**
- 4. The permittee shall not allow the emission of an air pollutant to exceed the amount of any emission allowances that an affected source lawfully holds as of the allowance transfer deadline pursuant to R 336.1299(2)(a) and 40 CFR 72.9(c)(1)(i). **(R 336.1213(10))**
- 5. The permittee shall comply with the provisions of the Transport Rule NOx Annual Trading Program, as specified in 40 CFR Part 97, Subpart AAAAA, as they apply to FGCTG. **(40 CFR Part 97, Subpart AAAAA)**
- 6. The permittee shall comply with the provisions of the Transport Rule NOx Ozone Season Trading program, as specified in 40 CFR Part 97, Subpart BBBBB, as they apply to FGCTG. **(40 CFR Part 97, Subpart BBBBB)**
- 7. The permittee shall comply with the provisions of the Transport Rule SO₂ Group 1 Trading Program, as specified in 40 CFR Part 97, Subpart CCCCC, as they apply to FGCTG. **(40 CFR Part 97, Subpart CCCCC)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

Appendix 7. Emission Calculations

NATURAL GAS-FIRED COMBUSTION TURBINES:

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FGCTG:

NO_x

The permittee shall use the following formulas to calculate NO_x emissions for FGCTG. The calculations will be used to demonstrate compliance with the FGCTG emission limit of 244 tpy based on a 12-month rolling time period average.

Daily-Monthly Emissions:

Daily combustion turbine operating status (start up and shut down operation as defined in FGCTG SC III.3 or normal operations) operating load, and fuel usage must be monitored and recorded.

To estimate emissions during start up and shut down events the permittee shall use the lb/event emission rate ~~using data supplied by the turbine vendor on a per-event basis~~, as specified in FGCTG Emission Limits Table, SC VI.3.

~~The actual combustion turbine NO_x emissions, as provided by the NO_x CEMS data, shall be used to calculate the tons per month (TPM) for FGCTG. (An average is not acceptable.)~~

~~Until stack testing can be completed the applicant shall use the lb/MMBTU emission rate for normal operation specified in FGCTG Emission Limits Table. Stack testing the combustion turbines at various loads must be completed to develop emission factors (EF). To determine which emission factor to use, the permittee shall compare the monitored and recorded combustion turbine load to the emission factor that was developed at that load during testing. (If the load falls between tested values, the permittee shall default to the more conservative value for that day of operation.)~~

~~The actual combustion turbine daily fuel usage shall be used to calculate the tons per day (TPD) for FGCTG. (An average is not acceptable.) The daily fuel usage shall be converted to a MMBtu/day heat input by using a conversion factor of 1,020 MMBTU/MMcf of natural gas.~~

Emissions of NO_x in ~~TPMD~~ from FGCTG are calculated as follows:

$$TPM = NO_x \text{ Emissions from } CEMS_{EU-CTG1} \left(\frac{\text{ton}}{\text{month}} \right) + NO_x \text{ Emissions from } CEMS_{EU-CTG2} \left(\frac{\text{ton}}{\text{month}} \right) + \left(NO_x EF_{EU-CTG1} * \frac{\text{Number of Events}}{\text{month}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} \right) + \left(NO_x EF_{EU-CTG2} * \frac{\text{Number of Events}}{\text{month}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} \right)$$

NO_x Emissions from CEMSEU-CTG = The NO_x emission rate from CEMS for the specific turbine included in FGCTG.

NO_xEF EU-CTG# = NO_x start up and shut down lb/event emission rates as specified in FGCTG Emission Limits Table.

$$\begin{aligned}
TPD = & \left(\frac{NOxEF_{EU-CTG1} lb}{MMBtu} \right) * \left(\frac{1,020 MMBtu}{MMscf} \right) * \left(\frac{MMscf_{EU-CTG1}}{day} \right) * \left(\frac{ton}{2,000 lb} \right) \\
& + \left(\frac{NOxEF_{EU-CTG2} lb}{MMBtu} \right) * \left(\frac{1,020 MMBtu}{MMscf} \right) * \left(\frac{MMscf_{EU-CTG2}}{day} \right) * \left(\frac{ton}{2,000 lb} \right) \\
& + \left(\frac{NOxEF_{EU-CTG1 Startup / Shutdown} lb}{Event} \right) * \left(\frac{Number Events}{day} \right) * \left(\frac{ton}{2,000 lb} \right) \\
& + \left(\frac{NOxEF_{EU-CTG2 Startup / Shutdown} lb}{Event} \right) * \left(\frac{Number Events}{day} \right) * \left(\frac{ton}{2,000 lb} \right)
\end{aligned}$$

~~NOxEF_{EUCTG} = The NOx emission factor for the specific turbine included in FGCTG.~~

~~MMscf_{EUCTG}/day = The daily fuel flow rate for the specific turbine included in FGCTG.~~

Monthly Emissions:

~~The permittee shall sum the daily NOx emissions from FGCTG for a given month to calculate the monthly NOx emissions.~~

12-Month Rolling Emissions:

The permittee shall sum the NOx emissions from FGCTG in a given month to the NOx emissions from FGCTG from the previous eleven (11) months to calculate the 12-month rolling emissions.

FG-FACILITY Emissions:

The permittee shall sum the emissions calculated for FGCTG in Appendix A, EU-EMERGEN, EU-FIREPUMP, FG-FUELHTR and any other later permitted or exempt equipment to demonstrate compliance with the NOx FG-FACILITY limit of less than 249 tpy.

CO

The permittee shall use the following formulas to calculate CO emissions for FGCTG. The calculations will be used to demonstrate compliance with the FGCTG emission limit of 246 tpy based on a 12-month rolling time period average.

Monthly Daily Emissions:

Daily combustion turbine operating status (start up and shut down operation as defined in FGCTG SC III.3 or normal operations) operating load, and fuel usage must be monitored and recorded.

To estimate emissions during start up and shut down events the permittee shall use the lb./event emission rate ~~using data supplied by the turbine vendor on a per-event basis,~~ as specified in FGCTG Emission Limits Table, ~~SC VI.3~~

~~Until stack testing can be completed the applicant shall use the lb./MMBtu emission rate for normal operation specified in FGCTG Emission Limits Table. Stack testing the combustion turbines at various loads must be completed to develop emission factors (EF). To determine which emission factor to use, the permittee shall compare the monitored and recorded combustion turbine load to the emission factor that was developed at that load during testing. (If the load falls between tested values, the permittee shall default to the more conservative value for that day of operation.)~~

The actual combustion turbine monthly fuel usage in MMBtu, as determined by CEMS, shall be used to

~~calculate the TPM for FGCTG. (An average is not acceptable.) The actual combustion turbine daily fuel usage shall be used to calculate the TPD for FGCTG. (An average is not acceptable.) The daily fuel usage shall be converted to a MMBtu/day heat input by using a conversion factor of 1,020 MMBtu/MMcf of natural gas.~~

Emissions of CO in ~~TPM~~ from FGCTG are calculated as follows:

$$TPM = (COEF_{EU-CTG1} * MMBtu_{EUCTG1} / Month * \frac{1 \text{ ton}}{2000 \text{ lbs}}) + (COEF_{EU-CTG2} * MMBtu_{EUCTG2} / Month * \frac{1 \text{ ton}}{2000 \text{ lbs}}) + \left(COEF_{EU-CTG1_SUSD} * \frac{\text{Number of Events}}{\text{month}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} \right) + \left(COEF_{EU-CTG2_SUSD} * \frac{\text{Number of Events}}{\text{month}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} \right)$$

~~COEF EU-CTG = The CO emission factor for the specific turbine included in FGCTG in lb/MMBtu.
COEF EU-CTG#_SUSD = CO start up and shut down lb/event emission rates as specified in FGCTG Emission Limits Table.~~

~~MMBtuEUCTG/mo = The monthly fuel heat input rate for the specific turbine included in FGCTG as measured by the CEMS.~~

$$TPD = \left(\frac{COEF_{EU-CTG1} \text{ lb}}{MMBtu} \right) * \left(\frac{1,020 \text{ MMBtu}}{MMscf} \right) * \left(\frac{MMscf_{EU-CTG1}}{\text{day}} \right) * \left(\frac{\text{ton}}{2,000 \text{ lb}} \right) + \left(\frac{COEF_{EU-CTG2} \text{ lb}}{MMBtu} \right) * \left(\frac{1,020 \text{ MMBtu}}{MMscf} \right) * \left(\frac{MMscf_{EU-CTG2}}{\text{day}} \right) * \left(\frac{\text{ton}}{2,000 \text{ lb}} \right) + \left(\frac{COEF_{EU-CTG1 \text{ Startup / Shutdown}} \text{ lb}}{\text{Event}} \right) * \left(\frac{\text{Number Events}}{\text{day}} \right) * \left(\frac{\text{ton}}{2,000 \text{ lb}} \right) + \left(\frac{COEF_{EU-CTG2 \text{ Startup / Shutdown}} \text{ lb}}{\text{Event}} \right) * \left(\frac{\text{Number Events}}{\text{day}} \right) * \left(\frac{\text{ton}}{2,000 \text{ lb}} \right)$$

~~COEF_{EUCTG} = The CO emission factor for the specific turbine included in FGCTG.~~

~~MMscf_{EUCTG}/day = The daily fuel flow rate for the specific turbine included in FGCTG.~~

Monthly Emissions:

~~The permittee shall sum the daily CO emissions from FGCTG for a given month to calculate the monthly CO emissions.~~

12-Month Rolling Emissions:

~~The permittee shall sum the CO emissions from FGCTG in a given month to the CO emissions from FGCTG from the previous eleven (11) months to calculate the 12-month rolling emissions.~~

~~The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FGCTG:~~

FG-FACILITY Emissions:

~~The permittee shall sum the emissions calculated for FGCTG in Appendix A, EU-EMERGEN, EU-FIREPUMP, FG-FUELHTR and any other later permitted or exempt equipment to demonstrate compliance with the CO FG-FACILITY limit of less than 249 tpy~~

FACILITY-WIDE EMISSIONS:

CO:

~~The permittee shall sum the emissions calculated for FGCTG in the above CO portion of this appendix with those from EUEMERGEN, EUFIREPUMP, FGFUELHTR and any other later permitted or exempt equipment to demonstrate compliance with the CO FGFACILITY limit of less than 249 tpy.~~

NOx:

~~The permittee shall sum the emissions calculated for FGCTG in the above NOx portion of this appendix with those from EUEMERGEN, EUFIREPUMP, FGFUELHTR and any other later permitted or exempt equipment to demonstrate compliance with the NOx FGFACILITY limit of less than 249 tpy.~~

Appendix 8. Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.

Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of trial start-up, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.
2. Within 150 calendar days after commencement of trial start-up, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 180 calendar days after commencement of trial start-up, the permittee shall complete the installation and testing of the CEMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table:

<u>Pollutant</u>	<u>Applicable PS</u>
<u>NO_x</u>	<u>2</u>
<u>O₂ & CO₂</u>	<u>3</u>
<u>CO</u>	<u>4</u>

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS, listed in the table above, of Appendix B to 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F).
8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
 - a. A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
 - b. A report of all periods of CEMS downtime and corrective action.
 - c. A report of the total operating time of each turbine in FGCTG during the reporting period.
 - d. A report of any periods that the CEMS exceeds the instrument range.
 - e. If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep all monitoring data on file for a period of at least five years and make them available to the AQD upon request.